Comment on gmd-2021-365

Anonymous Referee #2

Referee comment on "wavetrisk-2.1: an adaptive dynamical core for ocean modelling" by Nicholas K.-R. Kevlahan and Florian Lemarié, Geosci. Model Dev. Discuss., https://doi.org/10.5194/gmd-2021-365-RC2, 2022

This is a well-written paper on the ocean version of the WAVETRISK model worth publication. It discusses the equations being solved along with their spatial discretizations, the time-stepping module, the vertical diffusion and TKE closure, the penalisation of lateral boundaries, outline of the relevant algorithms, and finally numerical results against some standard test cases.

I was able to view the very detailed review of Referee # 1. I agree with his recommendations and suggestions. He has addressed every relevant issue worth mentioning. My only personal recommendation would be to add some convergence plots (to test the accuracy of the WAVETRISK model) and some scaling plots e.g. against the number of cores (to test the performance).